

WASHINGTON STATE DEPARTMENT OF HEALTH OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS

ANNUAL GROWING AREA REVIEW

PREPARED BY: Donald J. Melvin, Environmental Specialist
AREA: North Dyes Inlet
YEAR ENDING: December 31, 2005
CLASSIFICATION: Conditionally Approved, Restricted, Prohibited

ACTIVITIES IN THE GROWING AREA IN 2005:

The Conditionally Approved area was sampled 12 times and the remainder of the area was sampled 6 times during 2005 in accordance with the NSSP systematic random sampling criteria. The Conditionally Approved area was closed a total of 56 days due to CSO events in accordance with the Conditional area management plan. Shellfish were harvested from the Chico Bay Restricted area and relayed to Dabob Bay. DOH completed a survey of the shoreline and uplands around a small cove south of Erlands Point, currently classified as "prohibited", in response to a request for harvest certification. Twelve drainages/discharges and nine developed parcels were evaluated. Based on the type and condition of the surveyed on-site sewage systems and the elevated fecal coliform bacteria levels found in the drainages and discharges, the area could not be approved for commercial harvest.

ANALYTICAL RESULTS OF WATER SAMPLES:

Table #1 summarizes the results of the most recent 30 water samples collected from stations in the restricted, and prohibited portions of the North Dyes Inlet area. This summary shows that all restricted area stations pass the NSSP water quality standard. Table #2 summarizes the results of the most recent 30 water samples collected from stations in the conditionally approved portions of the North Dyes Inlet area. This summary shows that station #465 fails the water quality standard and stations #481 and #482 are threatened due to elevated levels of bacteria. Individual sampling results for stations #465, #481, and #482 are shown in Tables #3, #4, and #5 respectively.

CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:

We currently have no information indicating that the area has new sources of pollution.

CLASSIFICATION STATUS:

- ☐ Well within the classification standards
- ☐ Meets standards but some concerns
- ☐ Meets standards but threatened with a downgrade in classification
- ☒ Fails to meet classification standards

REMARKS AND RECOMMENDATIONS:

With the exception of the portion of shoreline represented by sampling station #465, the North Dyes Inlet growing area meets pollution source and water quality criteria for the current classifications. Pollution source investigations should be initiated in the vicinity of station #465 to identify and correct the source(s) of contamination. Clear, Strawberry, Barker, and Chico creeks are on the 303D list for fecal coliform.

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MANAGEMENT PLAN EVALUATION – BRIEFLY DESCRIBE THE FOLLOWING COMPONENTS:

- 1. Have all parties involved complied with the conditions in the management planYes
 - 2. Has reporting been adequate to manage the conditional areaYes
 - 3. Does the area consistently meet approved area criteria when it is open for harvestYes
 - 4. Has a field inspection of critical pollution sources been conductedYes
- An evaluation was completed on the Bremerton Eastside CSO treatment facility.

TABLE 1**SUMMARY OF MARINE WATER DATA (SRS)**Growing Area: **DYES INLET**Classification: **Restricted**From **09/17/2001** To **12/14/2005****FECAL COLIFORM ORGANISMS/100 ML**

Station Number	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
469	Restricted	30	1.7 - 170.0	3.4	16.0	Yes
470	Restricted	30	1.7 - 33.0	2.7	7.0	Yes
471	Restricted	30	1.7 - 79.0	6.8	31.0	Yes
472	Restricted	30	1.7 - 240.0	7.7	46.0	Yes
473	Restricted	30	1.7 - 540.0	6.7	40.0	Yes
474	Restricted	30	1.7 - 130.0	4.0	16.0	Yes
463	Prohibited	36	1.7 - 33.0	3.6	11.0	Yes
466	Prohibited	28	1.7 - 170.0	11.2	69.0	*N/A
492	Prohibited	30	1.7 - 22.0	2.1	4.0	Yes

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

* N/A - SRS criteria require a minimum of 30 samples from each station. *

† All samples have been verified.

TABLE 2**SUMMARY OF MARINE WATER DATA (APC)**Growing Area: **DYES INLET**Classification: **Conditionally Approved**From **02/20/2003** To **12/14/2005****FECAL COLIFORM ORGANISMS/100 ML**

Station Number	Classification	Number of Samples	Range	Geometric Mean	% Samples > 43	Meets Std.
462	Conditionally Approved	31	1.7 - 79.0	3.0	3.2	Yes
464	Conditionally Approved	31	1.7 - 33.0	4.6	0.0	Yes
465	Conditionally Approved	31	1.7 - 79.0	4.1	12.9	No
467	Conditionally Approved	30	1.7 - 49.0	4.4	3.3	Yes
468	Conditionally Approved	31	1.7 - 23.0	3.6	0.0	Yes
477	Conditionally Approved	31	1.7 - 49.0	2.2	3.2	Yes
478	Conditionally Approved	31	1.7 - 49.0	2.8	3.2	Yes
479	Conditionally Approved	31	1.7 - 46.0	2.6	3.2	Yes
480	Conditionally Approved	31	1.7 - 17.0	2.8	0.0	Yes
481	Conditionally Approved	31	1.7 - 130.0	4.6	6.4	Yes
482	Conditionally Approved	30	1.7 - 79.0	4.4	6.6	Yes
483	Conditionally Approved	31	1.7 - 22.0	2.4	0.0	Yes
484	Conditionally Approved	31	1.7 - 23.0	3.0	0.0	Yes
491	Conditionally Approved	31	1.7 - 130.0	2.6	3.2	Yes

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100ml with not more than 10 percent greater than 43 organisms/100ml. The above table shows bacteriological results in relation to program standards.

† All samples have been verified.

TABLE 3**SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS**Growing Area: **DYES INLET**Sampling Station Number: **465**Classification: **Conditionally Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
02/20/2003	10:37	Ebb	1.8	8	27
04/29/2003	13:10	Flood	2	11	27
06/16/2003	09:01	Ebb	1.7	14	24
08/12/2003	10:21	Ebb	1.7	17	26
10/14/2003	15:14	Ebb	1.7	14	31
11/17/2003	09:27	Flood	1.7	9	26
12/16/2003	13:42	Ebb	7.8	9	28
01/13/2004	10:22	Ebb	2	6	27
02/25/2004	15:23	Ebb	1.7	8	29
03/15/2004	11:59	Ebb	1.7	8	26
04/12/2004	13:08	Ebb	4.5	11	27
05/13/2004	09:12	Ebb	2	12	29
06/09/2004	14:34	Ebb	13	16	28
07/21/2004	08:49	Ebb	79	18	28
08/05/2004	14:23	Ebb	1.7	17	31
09/15/2004	08:35	Ebb	49	14	21
10/06/2004	14:57	Ebb	70	15	32
11/09/2004	08:50	Ebb	7.8	11	29
12/20/2004	15:08	Ebb	1.7	9	29
01/04/2005	12:41	Ebb	1.8	7	29
02/23/2005	14:42	Flood	1.7		31
03/29/2005	09:44	Ebb	2	8	25
04/19/2005	16:01	Ebb	4.5	13	28
05/11/2005	08:21	Ebb	4	12	28
06/14/2005	14:49	Ebb	1.7	16	30
07/05/2005	09:49	Ebb	7.8	16	29
08/16/2005	14:56	Flood	4.5	17	30
09/14/2005	12:48	Flood	1.7	15	29
10/11/2005	14:09	Flood	11	15	29
11/14/2005	09:34	Ebb	49	9	22
12/14/2005	12:00	Flood	2	9	30

Number of Samples: 31

Range: 1.7 - 79

Geometric Mean: 4.1

% Samples > 43 : 12.9032258064

† All samples have been verified.

TABLE 4**SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS**Growing Area: **DYES INLET**Sampling Station Number: **481**Classification: **Conditionally Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
02/20/2003	10:34	Ebb	2	8	27
04/29/2003	13:12	Flood	1.7	11	28
06/16/2003	09:03	Ebb	1.7	14	28
08/12/2003	10:24	Ebb	1.7	17	21
10/14/2003	15:19	Ebb	1.7	14	30
11/17/2003	09:29	Flood	2	9	20
12/16/2003	13:45	Ebb	7.8	9	28
01/13/2004	10:25	Ebb	4.5	6	20
02/25/2004	15:25	Ebb	23	8	29
03/15/2004	12:01	Ebb	4	8	28
04/12/2004	13:14	Ebb	23	12	18
05/13/2004	09:13	Ebb	7.8	12	29
06/09/2004	14:37	Ebb	2	16	28
07/21/2004	08:46	Ebb	2	17	25
08/05/2004	14:25	Ebb	4.5	18	31
09/15/2004	08:37	Ebb	130	14	22
10/06/2004	14:59	Ebb	49	15	31
11/09/2004	08:51	Ebb	1.7	11	29
12/20/2004	15:12	Ebb	4.5	9	29
01/04/2005	12:42	Ebb	4	7	29
02/23/2005	14:44	Flood	1.7		30
03/29/2005	09:45	Ebb	4.5	8	25
04/19/2005	16:04	Ebb	1.7	12	29
05/11/2005	08:23	Ebb	7.8	12	28
06/14/2005	14:52	Ebb	6.8	16	29
07/05/2005	09:47	Ebb	4	15	29
08/16/2005	14:58	Flood	7.8	17	30
09/14/2005	12:50	Flood	1.7	15	30
10/11/2005	14:18	Flood	6.8	15	29
11/14/2005	09:36	Ebb	23	9	25
12/14/2005	11:56	Flood	1.7	8	31

Number of Samples: 31

Geometric Mean: 4.6

Range: 1.7 - 130

% Samples > 43 : 6.4516129032

† All samples have been verified.

TABLE 5**SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS**Growing Area: **DYES INLET**Sampling Station Number: **482**Classification: **Conditionally Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
02/20/2003	10:31	Ebb	1.7	8	27
04/29/2003	13:14	Flood	4.5	11	27
06/16/2003	09:05	Ebb	1.7	14	28
08/12/2003	10:27	Ebb	6.8	17	26
10/14/2003	15:23	Ebb	1.7	14	30
11/17/2003	09:31	Flood	22	9	25
12/16/2003	13:48	Ebb	2	8	28
01/13/2004	10:27	Ebb	2	6	23
02/25/2004	15:27	Ebb	1.7	8	29
03/15/2004	12:03	Ebb	26	8	25
04/12/2004	13:17	Ebb	2	12	27
05/13/2004	09:16	Ebb	11	12	28
06/09/2004	14:39	Ebb	2	16	28
07/21/2004	08:55	Ebb	49	17	30
08/05/2004	14:28	Ebb	7.8	18	31
09/15/2004	08:39	Ebb	7.8	14	30
10/06/2004	15:02	Ebb	17	15	32
12/20/2004	15:15	Ebb	6.8	9	29
01/04/2005	12:44	Ebb	1.7	7	28
02/23/2005	14:46	Flood	1.7		31
03/29/2005	09:47	Ebb	4.5	8	25
04/19/2005	16:07	Ebb	1.7	12	28
05/11/2005	08:25	Ebb	4.5	12	28
06/14/2005	14:54	Ebb	2	16	30
07/05/2005	09:44	Ebb	2	15	28
08/16/2005	15:02	Flood	79	18	30
09/14/2005	12:52	Flood	1.7	16	27
10/11/2005	14:12	Flood	1.7	15	30
11/14/2005	09:38	Ebb	22	8	26
12/14/2005	11:53	Flood	1.7	8	31

Number of Samples: 30

Geometric Mean: 4.4

Range: 1.7 - 79

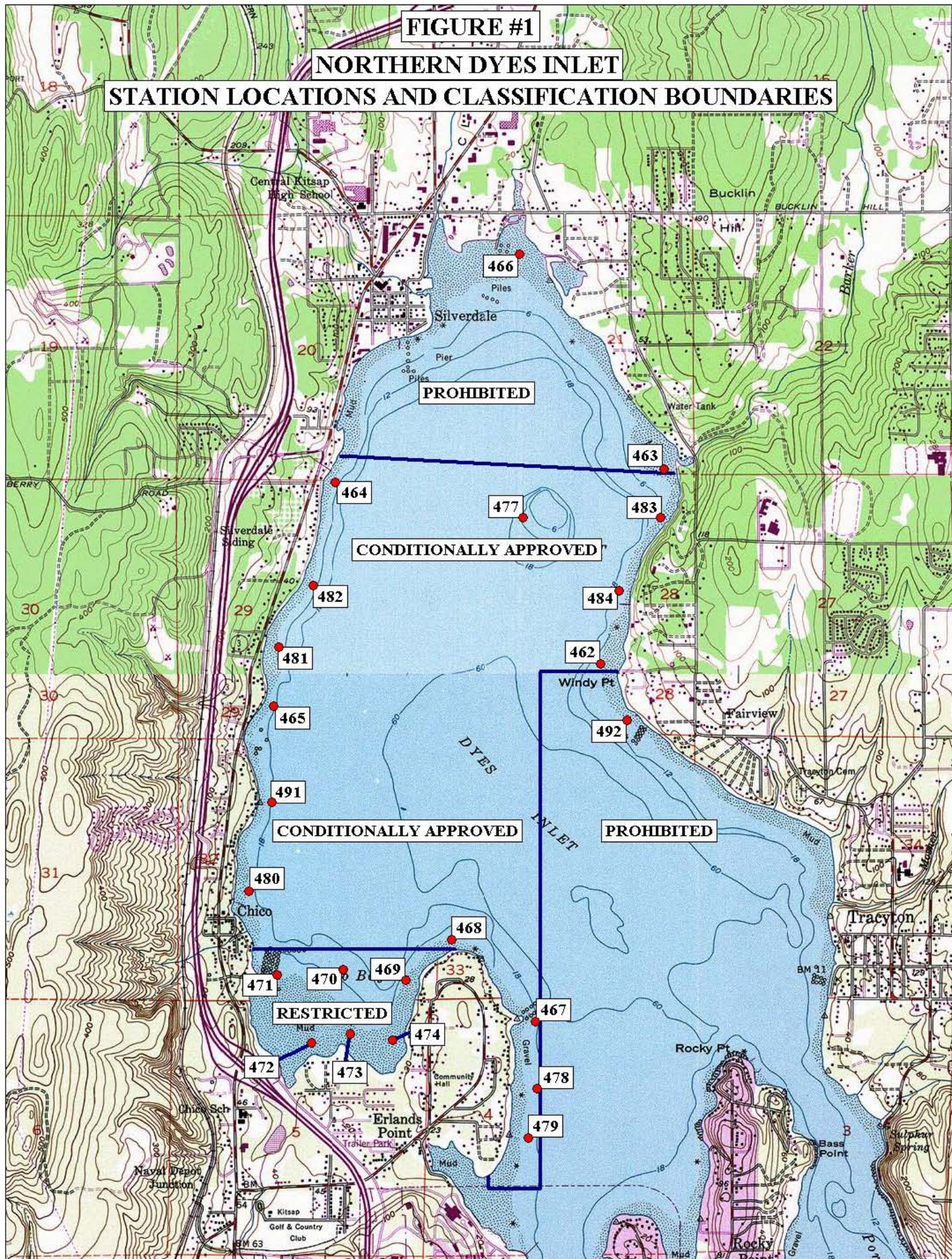
% Samples > 43 : 6.6666666666

† All samples have been verified.

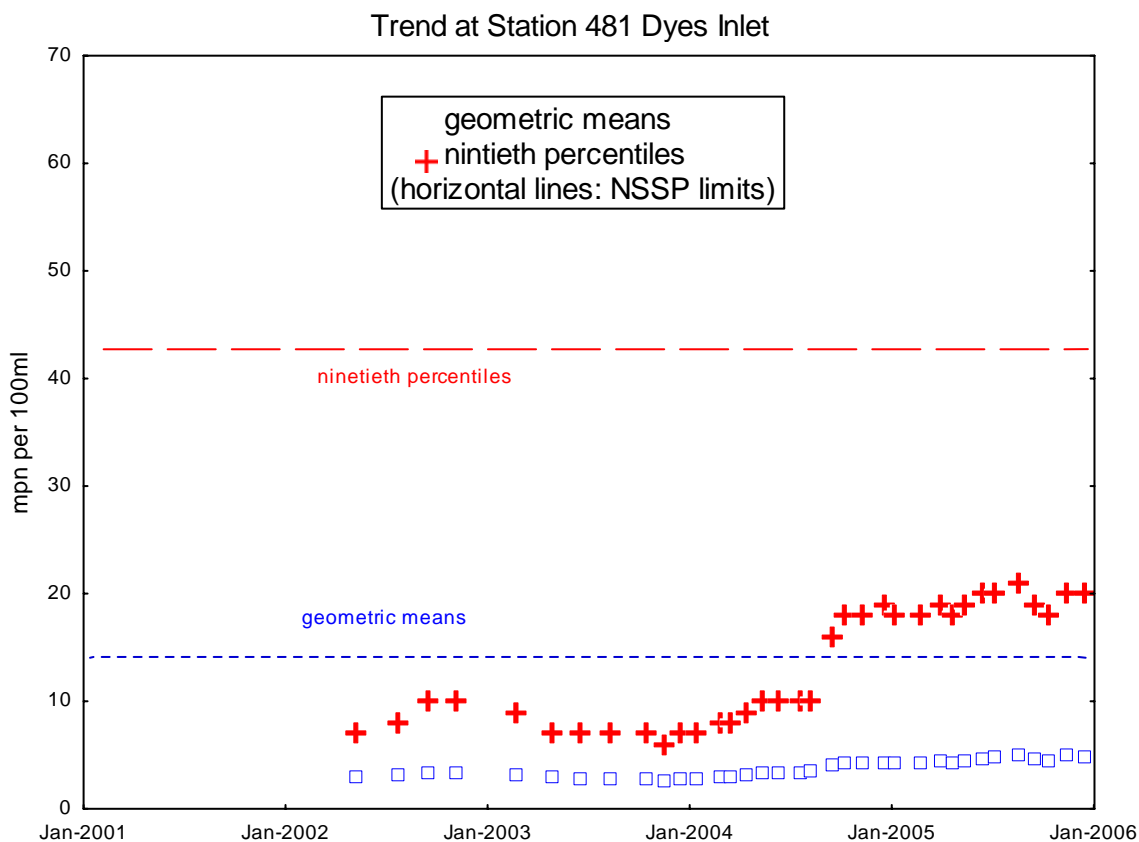
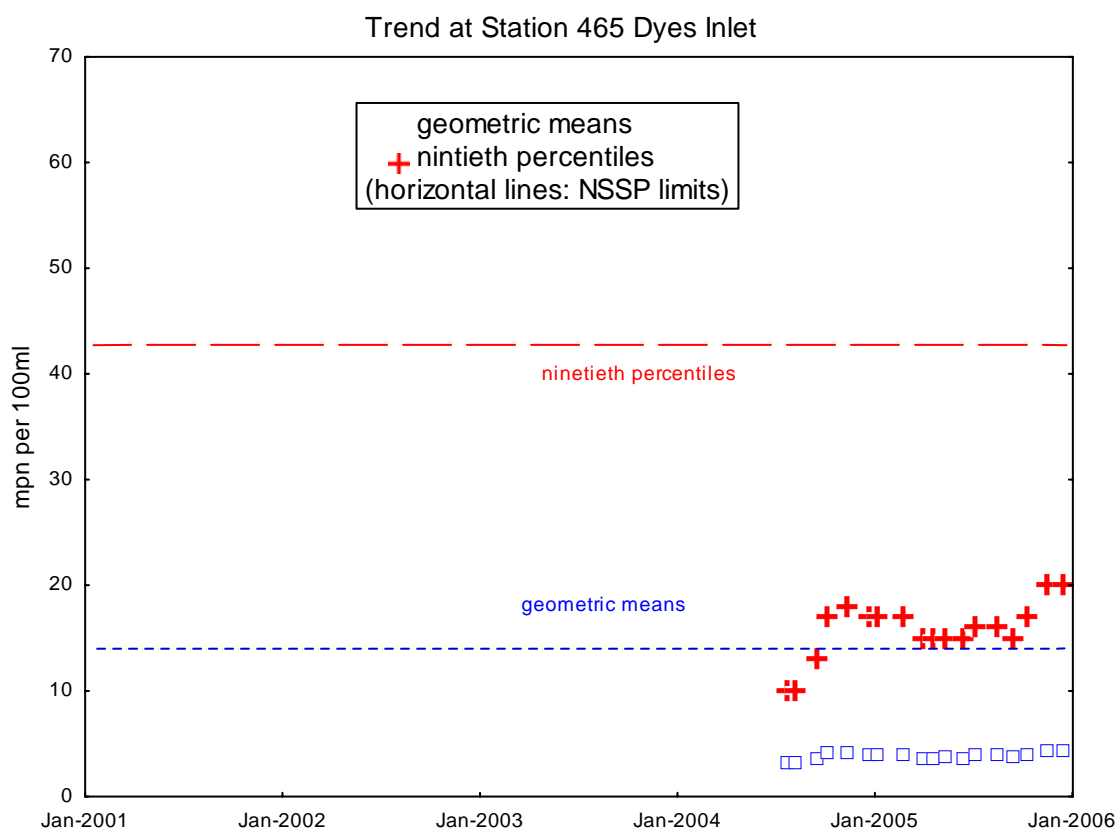
FIGURE #1

NORTHERN DYES INLET

STATION LOCATIONS AND CLASSIFICATION BOUNDARIES



Most recent five-year trend in fecal coliform pollution.



Trend at Station 482 Dyes Inlet

